

In the Specification:

Please make the following changes in the indicated specification paragraphs and sections:

Page 1, line 3, please insert the following heading:

BACKGROUND OF THE INVENTION.

Page 1, lines 22 to 30:

The continuously-produced glass sheet is subsequently cut into panels in various final and intermediate formats in a cross-cutting machine at an angle to the direction of flow. To this end ~~end, a mechanical small cutting wheel or thermally induced, e.g., using a laser beam,~~ strain states induced by a mechanical small cutting wheel or thermally induced, e.g., using a laser beam are typically used to produce a rupture in the glass surface, i.e., a crack or notch, which is continued across the width of the sheet; subsequently, the microscopically small fissure that results or was continued across the width of the sheet is driven through, using external forces, until it reaches the other side and the glass sheet is divided into separate pieces.

Page 2, lines 1 to 8:

During the shaping of the glass sheet, a somewhat different thickness distribution usually forms on the edges than in the center and/or ~~on the subsequent net~~ usable surface area due to surface forces, temperature and viscosity gradients

and as a result of mechanical shaping and conveyance tools, such as rollers. The thickness in the edge regions can become smaller ~~thinner~~ than in the net surface area, as is the case with the nozzle process using the down-draw method, or thicker than in the net surface area, as is the case with the float glass process. The edge region on either side of the glass sheet is referred to as the border region.

Page 3, line 15, please insert the following heading:

SUMMARY OF THE INVENTION.

Page 3, line 22 to 29:

According to the present invention, ~~the means for attaining the goal of this object~~ is attained with a method for cutting a continuous glass sheet during the production of flat glass with an inhomogeneous thickness distribution across its width, which comprises ~~by moving a cutting tool at an angle to the direction of travel across the width of the glass sheet with a cutting force predetermined by a controller, producing a fissure, then mechanically breaking the glass sheet along the fissure~~ when ~~are achieved by the fact that the~~ cutting force, adapted to the glass thickness, is actively specified by the controller.

Page 4, line 17, to page 5, line 5:

~~Patent~~ US Patent 3,282,140 A describes a method for cutting a continuous glass sheet during the production of flat glass by moving a cutting tool across the width

of the glass sheet at an angle to the direction of travel, producing a fissure, then mechanically breaking the glass sheet along the fissure. The cutting tool is thereby retained in a holder using a spring or a pneumatic cylinder or a combination of both such that the cutting tools bears with elastic resilience on the glass sheet surface with a predetermined amount of pressure. The cutting force is not actively varied by the spring and/or the pneumatic cylinder as it traverses the glass sheet. At most, the cutting force can be changed as a function of the distance between the glass sheet surface and the cutting tool with consideration for the spring force constants and/or the characteristic curve of the pneumatic cylinder. With the method according to the present invention, the cutting force is not predetermined passively using a spring or a pneumatic cylinder. Instead, it is predetermined electrically using a controller, and it is actively influenced by it, i.e., as a function of the technological circumstances and the inputs made by the system operators. This approach makes it possible to adapt the cutting force during on-going production to the technological circumstances while making the cut or between cuts without the need to mechanically convert the cutting device, because the mechanical properties of a spring and/or the characteristic curve of a pneumatic cylinder limit the range of variation of the cutting force.

Page 6, line 19, please insert the following heading:

BRIEF DESCRIPTION OF THE DRAWING.

Page 6, line 23, to page 7, line 2:

Figure 1 ~~shows~~ is a top plan view of the cross-cutting region for cutting a
continuous glass sheet,

Figure 2 ~~shows a top, sectional view of the cross cutter in Figure 1,~~
~~combined with a real, inhomogeneous thickness distribution of~~
~~thickness "d" of glass sheet in Part A, and the associated~~
~~distribution of cutting force "F" in Part B, and~~

Figure 2a is a vertical cross-sectional view through a cross-cutter shown in
figure 1 for performing the method according to the invention,

Figure 2b is a graphical representation of a real inhomogeneous thickness
distribution of a thickness, d, of a glass sheet,

Figure 2c is a graphical representation of a distribution of a cutting force F
associated with the thickness distribution shown in fig. 2b, and

Figure 3 is a block diagram ~~shows the layout of a controller for adjusting the~~
cutting force as a function of glass thickness.

Page 7, line 3, please insert the following heading:

DETAILED DESCRIPTION OF THE INVENTION.

Page 7, line 12 to 21:

As also shown in figure 2a ~~Figure-2~~, the cross cutter is composed of a
crossmember 3 extending transversely across the width of the glass sheet 1, on
which ~~said crossmember~~ a cutting head 4 is retained in a longitudinally
displaceable manner. A drive arrangement 5 is provided to move the cutting

head, and a home-position sensor 6 detects when the cutting motion starts. Cutting head 4 includes, in a known manner, a small cutting wheel 7 that is pressed against glass sheet 1 with a predetermined amount of force and produces a fissure at an angle to the width of the sheet when the cutting head 4 moves. The glass sheet 1 is not separated into pieces yet. The glass sheet is broken at the fissured point in a further working step.

Page 7, line 23 to 30:

As described initially, the thickness distribution of glass sheet 1 is not homogeneous along the cross-cut to be carried out ~~out, however, due to the method used~~. When flat glass is produced in float systems, the glass thickness in the outer regions, the “borders”, i.e., to the left and right of the net and/or good glass, is usually greater than within the net glass sheet. This real, inhomogeneous course of thickness is shown in figure 2b ~~Part A of Figure 2~~. If the cross-cutting procedure according to the related art is carried out using a cutting force with a constant setting, the following two conditions ~~result:~~ result.

Page 8, line 8 to 19:

2. The cutting force is set at a level that enables an adequate surface notch to be created in the net region, and the glass remains intact. An inadequate notch is created in the edge regions and, above all, the roller tracks, however. As a result, the borders are therefore either not broken or are broken in an uncontrolled manner in the

subsequent breaking procedure. To prevent these disadvantages, cutting force F is varied—as also shown in figure 2c Part A of Figure 2—as a function of the position coordinates of the contact point of small cutting wheel 7 on the glass sheet in a stroke at a right angle to the direction of flow of the glass sheet. A stronger cutting force is applied in the edge regions having greater glass thickness, and a lesser cutting force is applied in the net region.

Page 8, line 21 to 24:

With the exemplary embodiment of the present invention according to figure 2a to 2c Figure 2, two switchover points are provided that are predetermined in a fixed manner by a controller. The cutting force adapted to the glass thickness is set in a fixed manner as a function of an initial measurement of the thickness distribution.

Page 8, line 30, to page 9, line 12:

Figure 3 shows an exemplary embodiment of a controller for adjusting the cutting force as a function of glass thickness. The controller includes a control computer 8, in which operator inputs₁ such as switchover points and cutting forces₁ are entered. It includes a digital input that is connected with home-position sensor 6. It also includes an analog output that is connected via a power part 9 with stage 10, which represents ~~symbolizes~~ drive 5 for the cutting head, and the stage in cutting head 4 for adjusting the cutting force. The control computer 8 is further

connected with two stages 11, which are connected with position sensors on the crossmember 3, allowing the control computer to always know the position of the cutting head and, therefore, small cutting wheel 7, and enabling it to carry out appropriate measures in accordance with the operator inputs. If the position of switchover points shown in figure 2c ~~Figure 2A~~ is entered, for example, the switchover to a cutting force—which was also set in advance—takes place automatically as a function of the signals of stage 11.